GENERAL DESCRIPTION

RH06...1-...F...

✓ 4/3- and 4/2- way directional control valves with solenoid operation , heavy duty construction

✓ Removable AC and DC voltage coils-quick replacement and rotation in any direction without leakage from the system

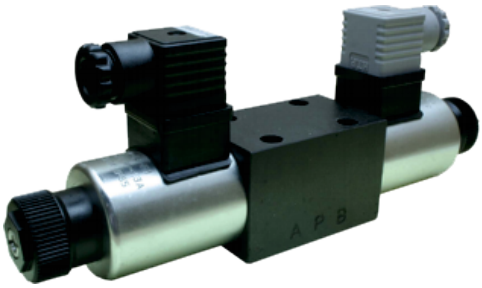
✓ Wet pin core tubes connected to a tank with high pressure capacity

✓ Manual override option (push button)

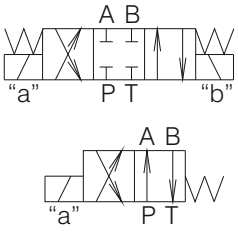
✓ Maximum control of hydraulic power

✓ Reliability and long life

✓ Mounting surface CETOP3 (NG6)



Symbol



The RH06...1...-...F... valves are solenoid operated directional spool valves. They are used to control the start , stop and direction of flow.

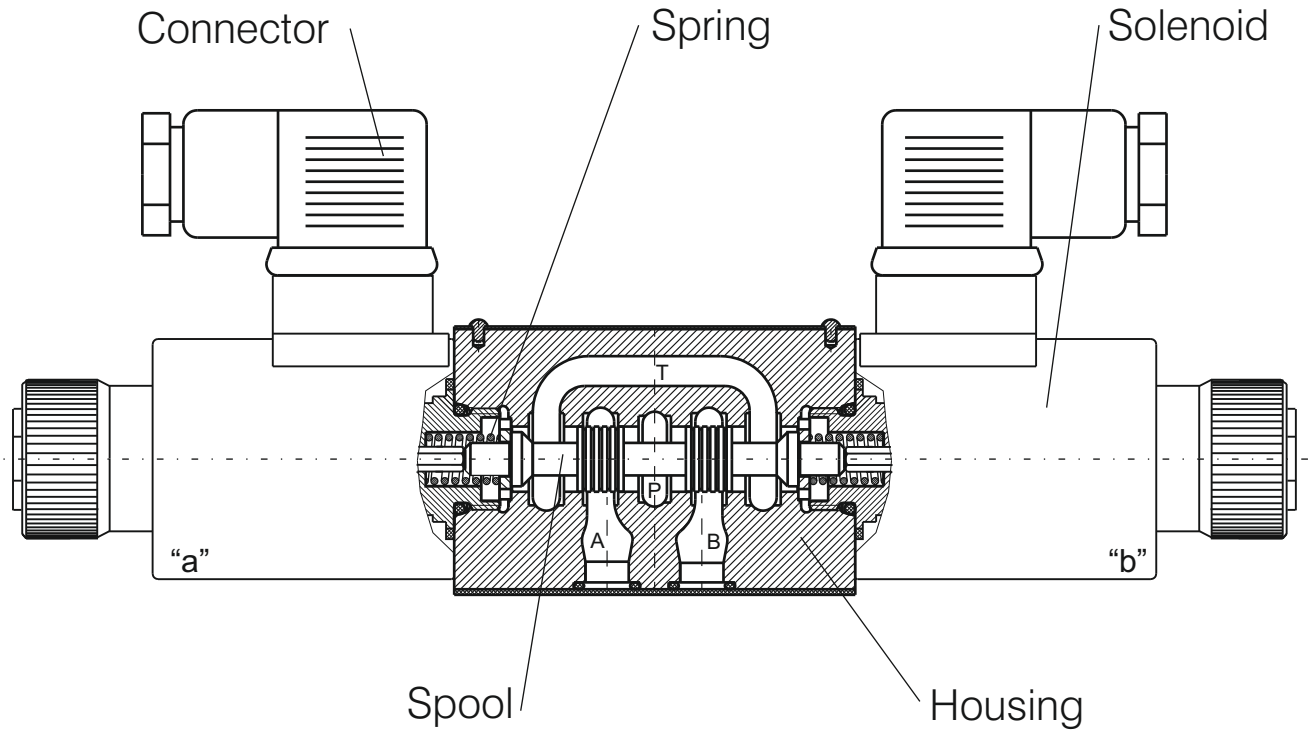
The RH06...1...-...F... valves consist of a spool , housing , springs and solenoids.

This model is designed with two-spring centered spool for 4/3- and 4/2- valves. The housing has 5-chambers.

The operating solenoids are DC type. For AC supply the solenoids are provided with rectifier , which is integrated into the installation ground of the connectors. The standard supply voltages are 12V DC , 24V DC , 48V DC , 110V AC(RAC) and 220V AC(RAC). Electrical connectors conform to DIN 43 650 standard.

In case of problem with the electric supply , an option for manual override is provided.

GENERAL DESCRIPTION



ORDERING CODE

RH	06	...	1	-	.../...	F	...	...	...	...	...

Directional control valve

Nominal size

Functional symbol
see page 3/7

Type of control: -electrical

Supply voltage/current frequency
see page 7/7

012/00
024/00
048/00
110/50
220/50

Modification

Connector
see page 7/7

C1
C2
C3
C4
C5

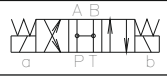
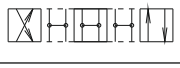
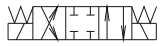
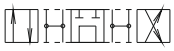
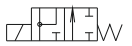
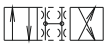
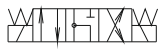
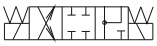
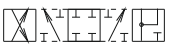
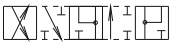
N - normal
T - tropical

Spacers
Omit -without spacers
S -With spacers
see page 5/7

Screw cap
Omit -with plastic cap
M -with metal cap
see page 5/7

Orifice in P line
Omit - without orifice
K1 - orifice ø0,8mm.
K2 - orifice ø1mm.
K3 - orifice ø1,2mm.
K4 - orifice ø1,5mm.
K5 - orifice ø2mm.
see page 5/7

FUNCTIONAL SYMBOLS

DESIG-NATION	SYMBOL	INTERMEDIATE	DESIG-NATION	SYMBOL	INTERMEDIATE
00			28		
01			32		
02			33		
04			34		
05			36		
06			39		
08			40		
10			41		
11			42		
12			45		
13			52		
14			61		
16			62		
17			64		
18			68		
19*			70		
20*			78		
21			82*		
24			83		
26			98		
27			99		

* Symbols 19 , 20 and 82 are with detent. Both switched positions are alternately fixed and there is no need to energize the solenoid continually. Other symbols on request.

TECHNICAL DATA

GENERAL

DATA	UNIT	VALUE/RANGE
Installation position		optional except symb."08","19", "20"and"82"-horizontal
Max. ambient temperature	°C	-20...+50
Weight single solenoid valve double solenoid valve	kg kg	1,600 2,200

HYDRAULIC

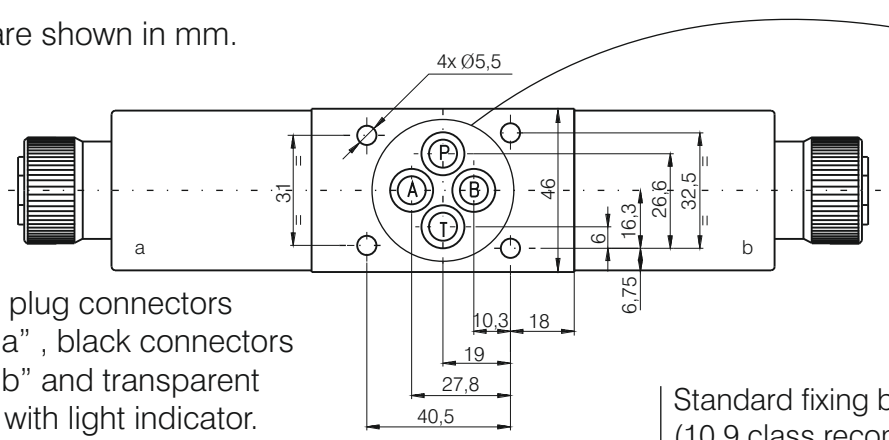
Max. pressure port P , A & B port T	MPa MPa	32 21
Rated flow (at Δp 0,1MPa.)	l/min	11...20
Max. flow (depend on symbol-see page 6/7)	l/min	80
Hydraulic fluid-mineral oil: -viscosity -filtration degree -temperature	 mm^2/s mm °C	 10...800 0.025 -20...80

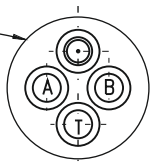
ELECTRICAL

Cyclic duration	%	100	
Waterproof		IP65	
Heat insulation		H	
Type of voltage		DC	AC
Available voltage /frequency	V/Hz	12/00 24/00 48/00	110/50(60) 220/50(60)
Voltage tolerance	%	±10	
Current consumption 12VDC 24VDC 48VDC 110V RAC 220V RAC	A	2,4 1,3 0,58	 0,5 0,25
Max. switching frequencies	cycle/h	15000	
Switching time at p=17,5MPa , on Q=40l/min (measured for off control valve symbol "01")	ms ms	50 25	

DIMENSIONS

All dimensions are shown in mm.



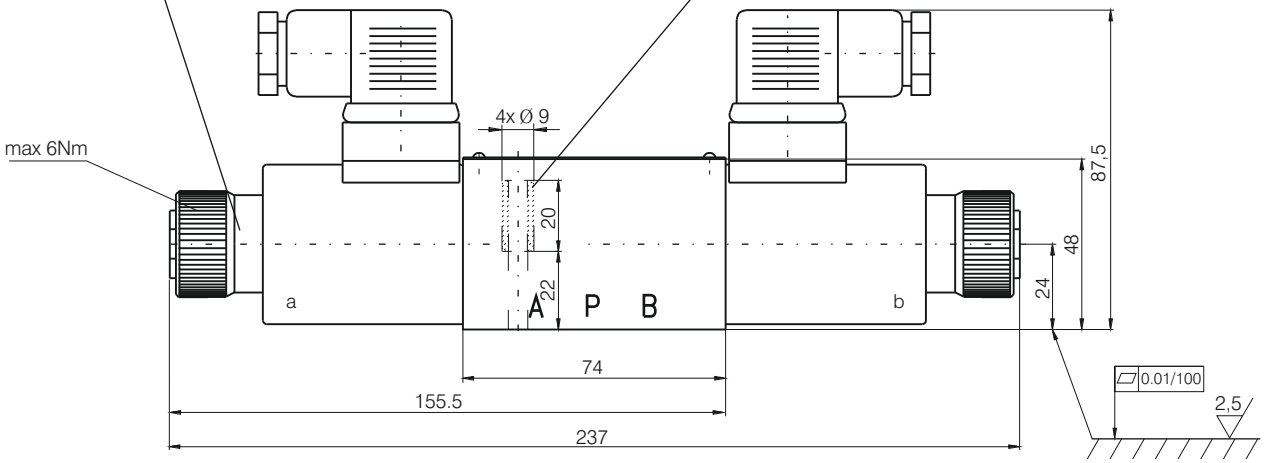


Use orifice in P line when inlet flow exceeds the operating limit of valve from "CHARACTERISTICS" see "ORDERING CODE" - code K...

Gray or white plug connectors for solenoid "a" , black connectors for solenoid "b" and transparent for solenoids with light indicator.

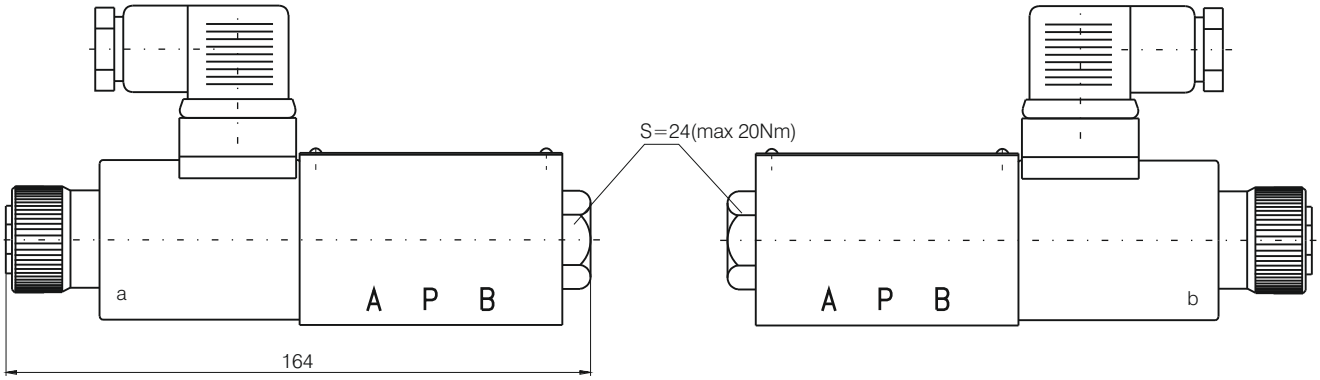
Standard fixing bolts M5x30 (10,9 class recommended). Torque 6...8 Nm.
In case of modular mounting spacers are available upon order
- see "ORDERING CODE"
- code S.

For one-lead supply scheme , the metal screw cap should be used see "ORDERING CODE" - code M



with solenoid "a"
for symbol: 11 , 12 , 14 , 17 , 24 , 27 , 33 , 34 , 39 , 45 , 68 , 70 and 83

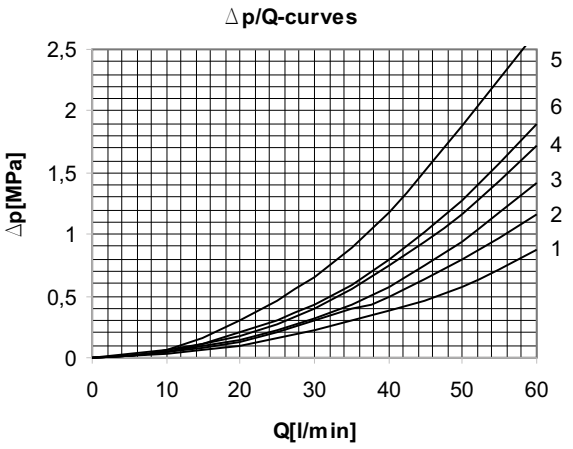
with solenoid "b"
for symbols: 10 , 13 , 16 , 28 , 32 , 36 , 64 and 78



The other dimensions are the same as double solenoid valve.

CHARACTERISTICS

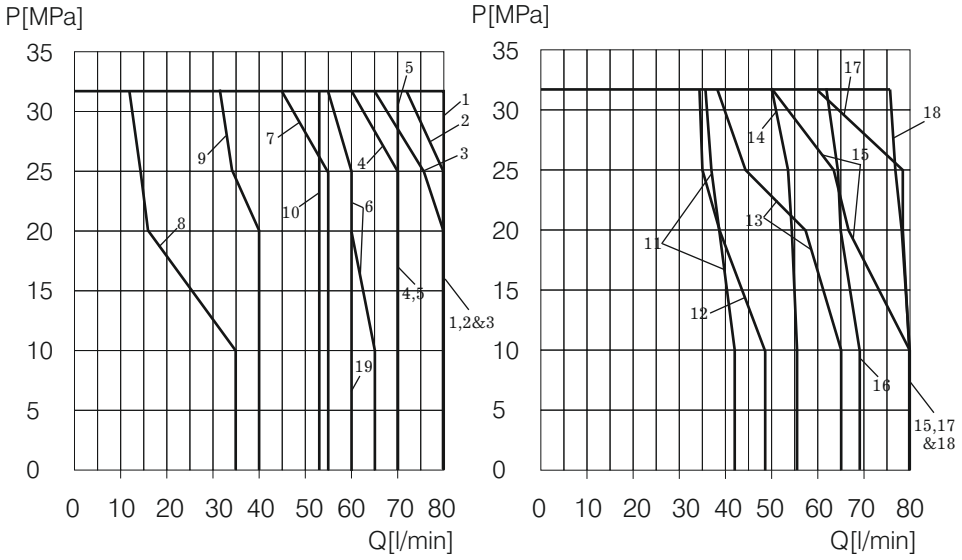
Δp/Q



SYMBOL	CURVE					SYMBOL	CURVE				
	P>A	P>B	A>T	B>T	P>T		P>A	P>B	A>T	B>T	P>T
00	2	2	1	1	3	28	3			1	
01	2	2	1	1		32	3	3			
02	5	5	5	5	4	33		2	1		3
04	3	3	1	1		34	1				
05	2	2	2	2		36	1	1	2	3	
06	3	3	3	3	4	39	1	1	3	2	
08	2	2	1	1		40		4	6		
10	3	4	3	2		41		4	1		
11	2	2	1	1		42	3	2	1	2	
12	4	3	2	3		45		2	1		
13	2	2				52	1	1			
14	5			5	4	61	4			1	
16	2			1		62	4			6	
17		2	2			64	2			1	
18	2	2	1	1		68	3	3			
19	2	2	2	2		70	3	2	1	2	
20	3	3	2	2		78	1			2	4
21(mid./end)	2/1	3	3	3		83		2	1		
24		3	1			99	2			2	4
26	3	2	1	2							
27	2			1							

p/Q

The operating limit of hydraulic power shown here is for applications with two directions of flow (e.g. from P to B and simultaneously from A to T). If the valve is with one direction passage only (e.g. from P to B and with blocked port A), the operating limit may considerably be reduced. The performance limits are measured with hydraulic oil 35±5 cSt , temperature 50 °C and supply voltage $0,9U_N$

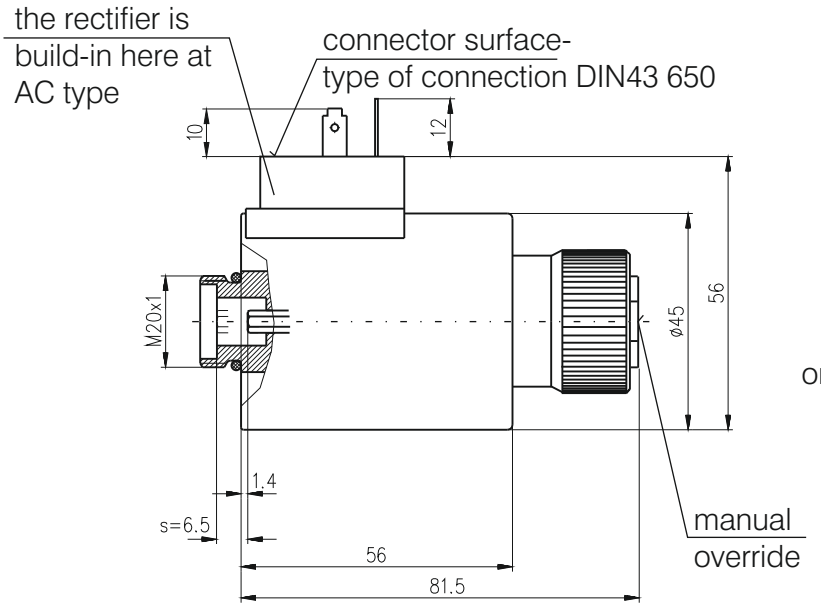


SYMBOL	CURVE	SYMBOL	CURVE
00	1	28	3
01	1	32	8
02	19	33	1
04	3	34	1
05	4	36	9
06	7	39	9
08	5	40	18
10	5	41	17
11	14	42	15
12	5	45	1
13	6	52	12
14	19	61	17
16	1	62	18
17	4	64	1
18	1	68	8
19	16	70	15
20	2	78	11
21	10	82	
24	3	83	1
26	15	98	
27	1	99	13

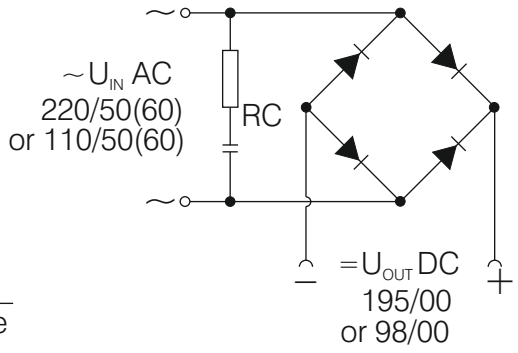
SOLENOIDS

AC & DC

All dimensions are shown in mm.



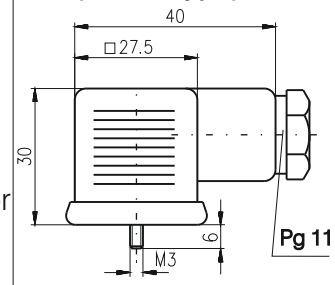
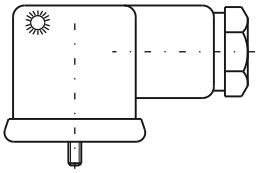
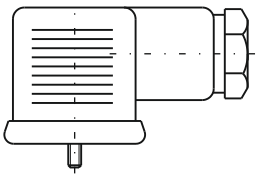
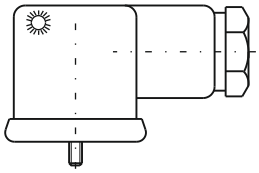
rectifier scheme



AC and DC solenoids have the same dimensions , connections and characteristics. The difference between AC and DC solenoids is in the integrated rectifier into the AC type - see “rectifier scheme”. The solenoids can be used for 50Hz and 60Hz. The supply voltages are as follows: 12V DC , 24V DC , 48V DC , 110V AC/50(60)Hz and 220V AC/50(60)Hz.

CONNECTORS

CODE/TYPE

C1	C2 (for DC type)	C3 (for DC type)	C4 (for AC type)	C5 (for AC type)
Without connector	 With standard connector - DIN 43 650	 Connector with light indicator (transparent)	 Connector with integrated “RC” filter	 Connector with light indicator and “RC” filter (transparent)

SEALS